United States Patent

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[54] **ADJUSTABLE WORK TABLE**
9 Claims, 7 Drawing Figs.

[52] **U.S. Cl.** **269/17**, 108/50, 118/503, 269/326, 280/47.2, 280/79.3
[51] **Int. Cl.** **B23g 3/06**
[50] **Field of Search** 118/35, 37, 40, 41, 42, 43, 500, 503; 108/3, 5, 12, 19, 50, 83, 114, 6; 280/42.7, 79.3; 269/17

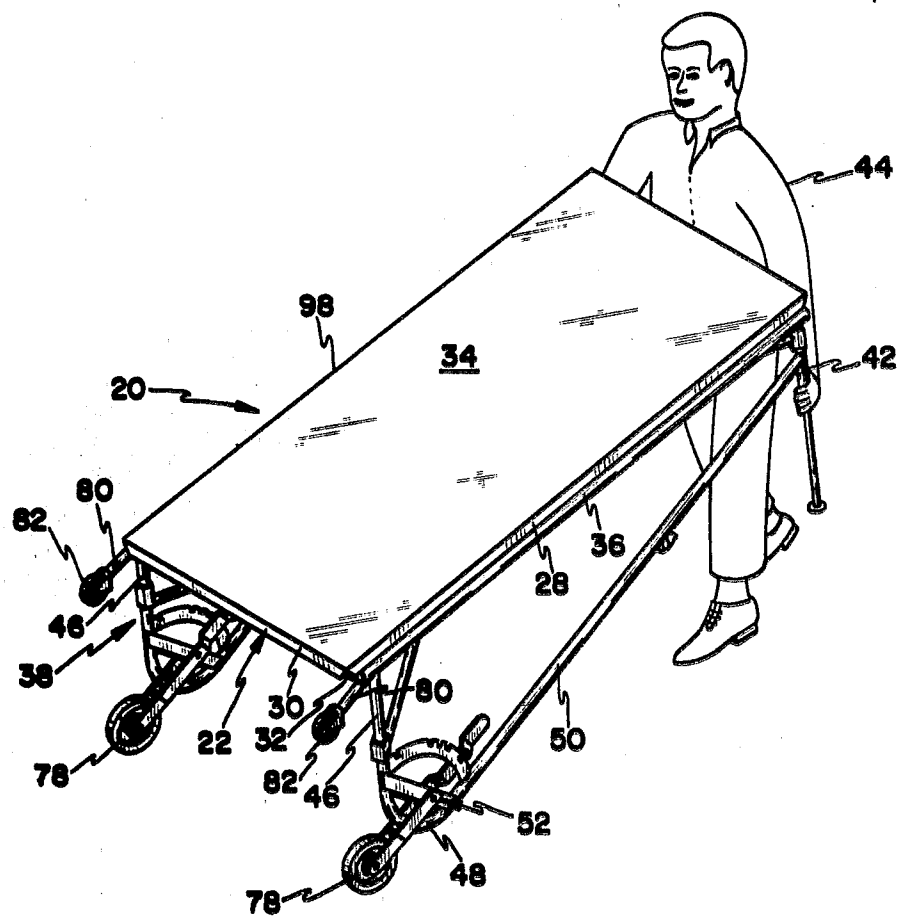
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ABSTRACT: Apparatus for preparing wall covering prior to placement of the wall covering on a wall, the apparatus having a laterally expandable frame and a plurality of work surface panels removably mounted upon the frame. The frame can be oriented in either a generally horizontal or an upright position disposed at any one of a plurality of angles with respect to the vertical. Wheels mounted upon one end of the frame accommodate lateral movement of the apparatus when the frame is in the upright orientation and are restrainable so that in the upright orientation, the apparatus can be easily displaced in only a side-to-side direction. A guide for the wall covering dispenses wall covering over the assembled work surface segments at a controlled rate.



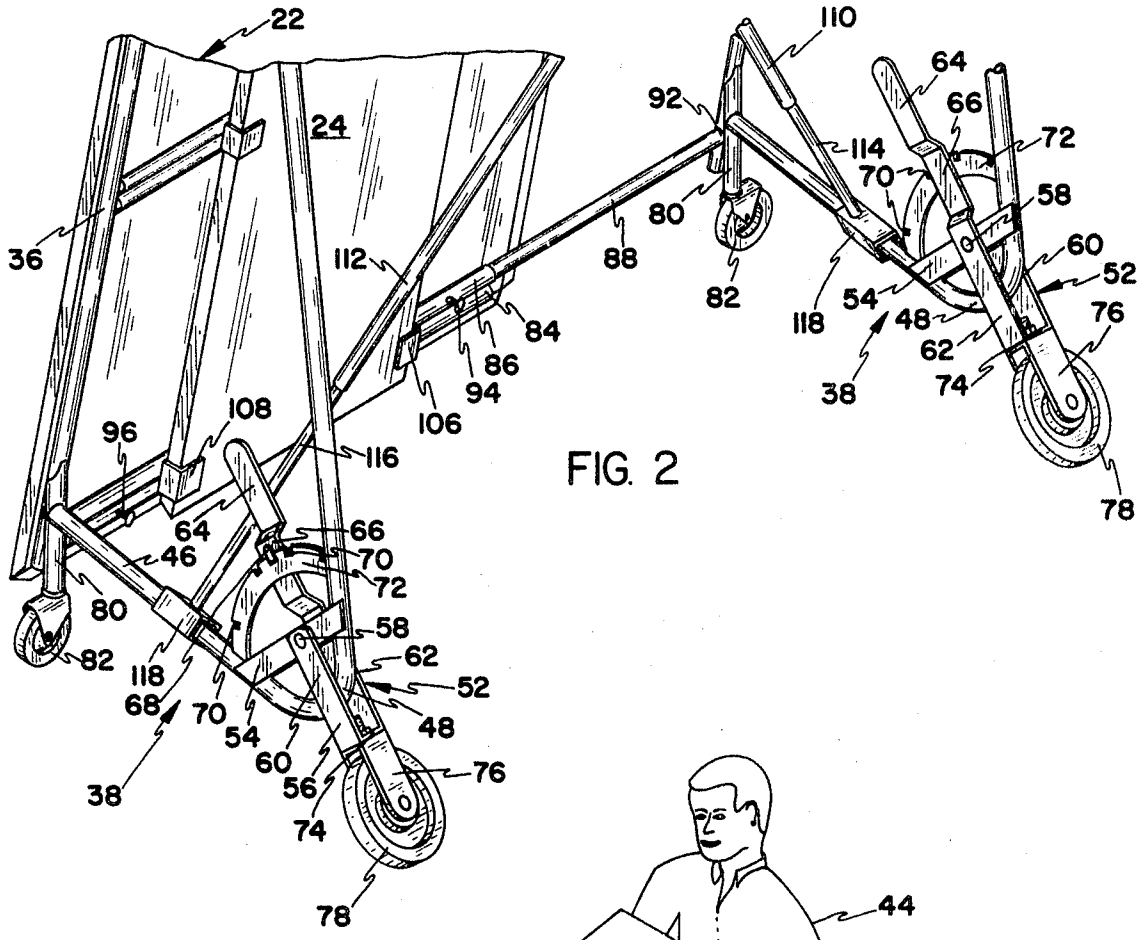


FIG. 2

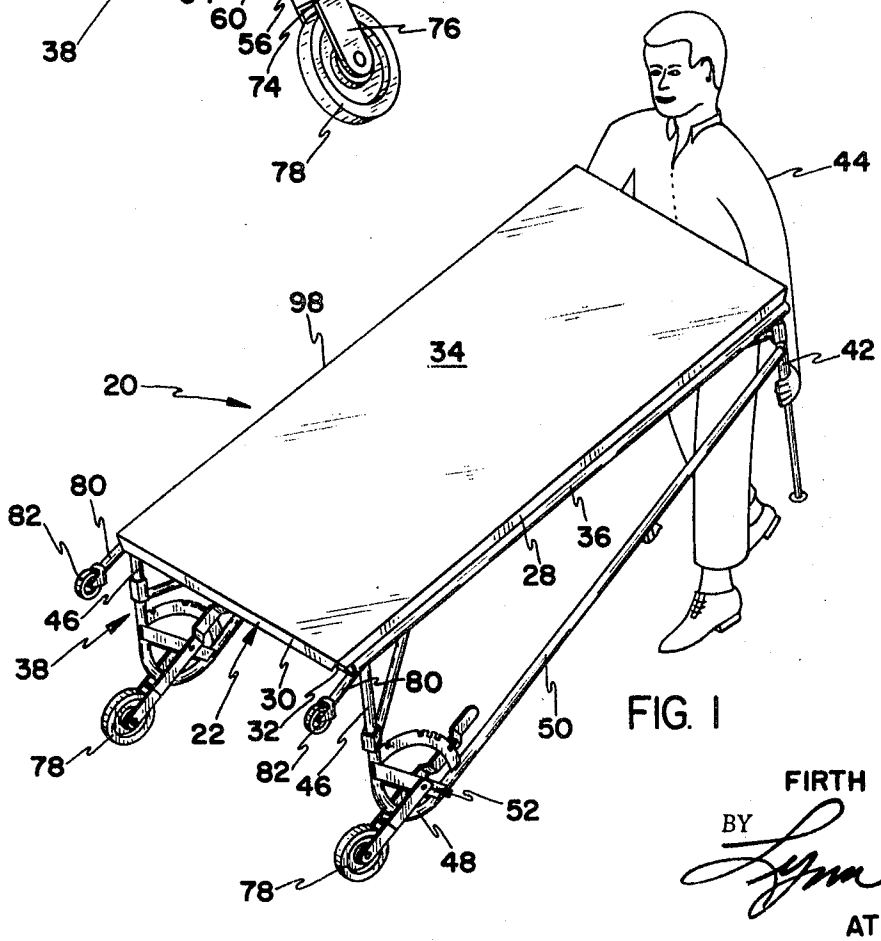


FIG. 1

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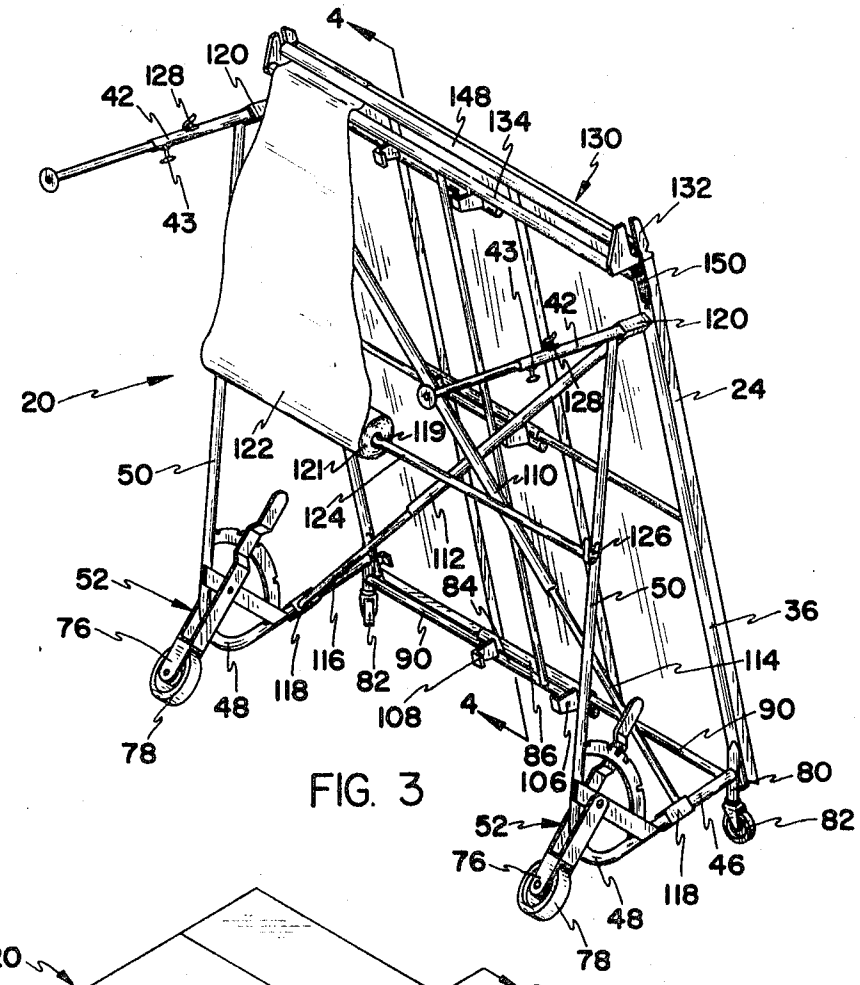


FIG. 3

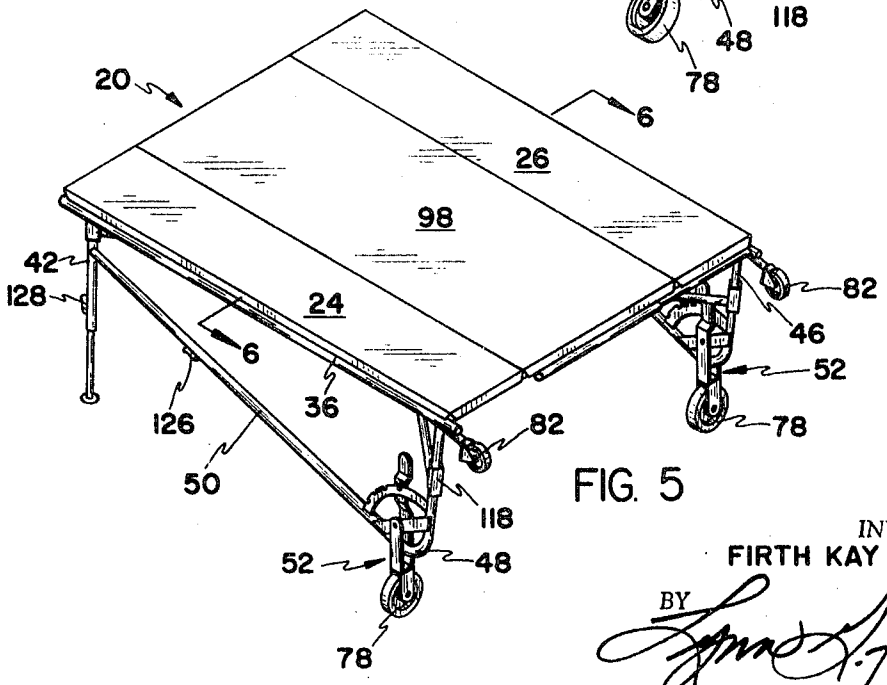


FIG. 5

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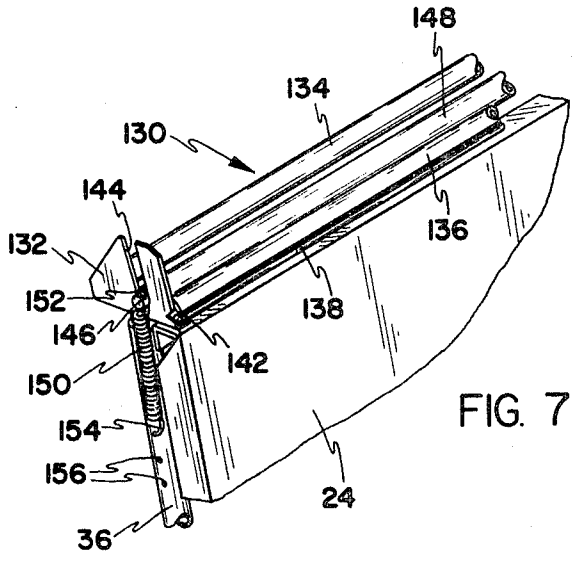


FIG. 7

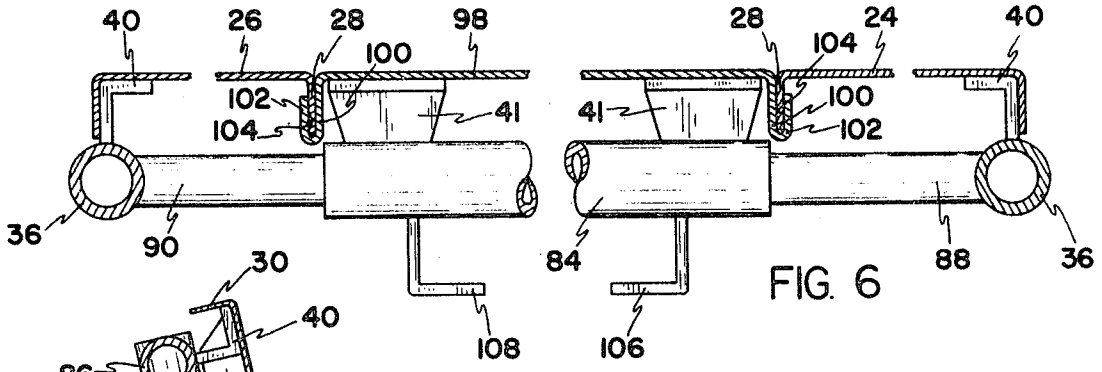


FIG. 6

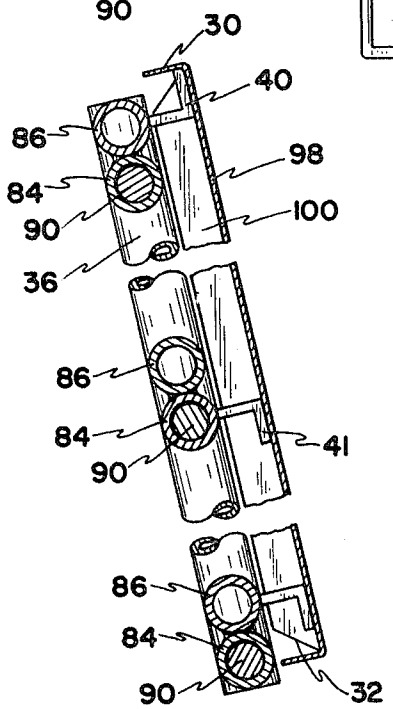


FIG. 4

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ADJUSTABLE WORK TABLE

BACKGROUND

1. Field of the Invention

The present invention relates to preparing wall coverings and more particularly to apparatus for treating wall coverings immediately prior to placing the wall coverings upon a wall.

2. Description of the Prior Art

It is common to use wall covering made of vinyl or like synthetic material. Vinyl wall coverings are normally supplied in rolls having a width of either 27 inches or 54 inches. Conventionally, the wall coverings have been cut to desired lengths, placed on a horizontal work surface or table and coated with adhesive material prior to placing the covering on a wall.

The conventional horizontal work surface upon which the wall covering has been placed must be large enough to accommodate all sizes of wall covering. Notably, when narrow wall coverings are treated with adhesive on the work table, excess adhesive accumulates on the work table surface. Thereafter, when wider wall covering is disposed on the work table, the accumulated adhesive presents an undesirably rough surface over which the wider wall covering must be superimposed. Moreover, the large work surface has been found awkward and cumbersome to move from place to place. The work surface is therefore, normally centrally stationed so that artisans using the work surface are required to repeatedly travel back and forth from an immediate work area to the centrally stationed work surface.

It is also known to provide a work surface which, when assembled, is disposed in an upright position at a fixed angle with respect to the vertical. An example of this type of work surface is disclosed in U.S. Pat. No. 3,169,080. Although the upright work surface has been successfully used, many artisans prefer a horizontal work surface, at least for some types of jobs. Until the present invention, no structure used to prepare wall coverings has provided a capability of presenting both horizontal and upright work surfaces as well as a selectively adjustable work area corresponding to the size of wall covering used.

It is a primary object of the present invention to provide novel apparatus for preparing wall coverings.

It is another primary object of the present invention to provide novel apparatus for preparing wall coverings on either a horizontal or generally vertical work surface having any one of a plurality of selected dimensions.

These and other objects and features of the present invention will become more fully apparent from the following description and appended claims taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS I

FIG. 1 is a perspective illustration of the presently preferred embodiment of the invention illustrated in the contracted position;

FIG. 2 is a fragmentary perspective view illustrating the frame in the partially expanded position;

FIG. 3 is a fragmentary perspective view of the backside of the presently preferred embodiment in fully expanded and assembled condition;

FIG. 4 is a cross section taken along line 4–4 of FIG. 3;

FIG. 5 illustrates in perspective the presently preferred embodiment of the invention in the expanded horizontal orientation;

FIG. 6 is a transverse cross section taken along line 6–6 of FIG. 5; and

FIG. 7 is a fragmentary perspective of the guide structure used with the presently preferred embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference is now made to the figures wherein like parts are designated with like numerals throughout.

Referring particularly to FIG. 1, the presently preferred embodiment of the invention generally designated 20 comprises a platform 22 having side edges 28 directed essentially normal to the plane of the platform 22. Each segment also comprises end edges 30 directed away from the platform 22 in the same direction as the side edges 28. Each edge 28 and 30 is angularly tapered at the corners so that the corners 32 appear notched. Preferably, the platform presents a substantially smooth upper work surface 34.

The platform 22 is carried upon a rectangular frame 36 comprising part of the understructure generally designated 38. As best shown in FIG. 4, the platform 22 rests upon outwardly projecting L-shaped brackets 40 and 41 as will be subsequently more fully described.

As best shown in FIG. 2, the frame 36 is preferably formed of tubularly configurated, structural elements although any suitable configuration could be used. The frame 36 has legs 42 integrally coupled to the frame 36 adjacent one end of the frame. The legs 42 are telescopically adjustable to any one of a plurality of extended positions and are secured in place with a thumbscrew 43 (FIG. 3). The legs 42 may be grasped in the hands of a person 44 as shown in FIG. 1 so that the apparatus 20 may be moved from place to place in a wheelbarrowlike fashion.

Downwardly projecting legs 46 are integral with the frame 36 adjacent the opposite end of the frame. The legs 46 are turned through more than 90° to form an elbow 48 and a longitudinal brace 50 which is welded or otherwise rigidly secured to the leg 42.

An adjustable wheel assembly 52 is mounted upon the understructure 38 at the elbow 48. The wheel assembly, best shown in FIG. 2, comprises a transverse support 54 extending between leg 46 and the brace 50. The support 54 is welded or otherwise secured adjacent the elbow 48. A generally U-shaped bracket 56 is secured to the support 54 by a pivot pin 58, the legs 60 and 62 of the bracket 56 being disposed on either side of the elbow 48. The leg 62 is substantially longer than leg 60 and presents a handle 64 which may be used to pivot the bracket 56 about the pin 58. Bracket 64 has a laterally displaced portion 66 which, in turn, presents an outwardly directed detent 68.

Detent 68 is selectively situated into any one of a plurality of notches 70 disposed in a peripheral edge of an arcuate guide 72. Guide 72 is disposed between the leg 46 and the brace 50 so that the notches 70 are upwardly directed. When desired, the handle 64 may be displaced laterally away from the guide 72 so that the detent 68 is removed from the notch 70. The bracket 56 may then be pivoted about the pin 58 into any one of a plurality of positions relative to the elbow 48. Thereafter, the detent may be allowed to move into another notch 70 where it is maintained by the memory of the material forming the handle 64. The detent prevents inadvertent subsequent displacement of the bracket 56 relative to the elbow 48.

Bracket 56 is connected at the essentially flat transverse portion 74 to another generally U-shaped bracket or clevis 76. Preferably, the bracket 56 and the clevis 76 are connected by a bolt or similar attachment accommodating relative rotation of the clevis 76 and the bracket 56. It should be noted, however, that it is presently preferred that the clevis 76 be selectively restrained so as to be substantially aligned with the bracket 56 as shown in FIG. 1 or, rotated 90° out of alignment as shown in FIG. 2. If desired, the clevis 76 and bracket 56 may be provided with conventional detent structure (not shown) selectively restraining the clevis 76 in either the FIG. 1 or the FIG. 2 positions. The bracket 76 can be rotated by exerting sufficient rotational force upon bracket 76 with the hands to overcome the restraining force.

A disk-shaped wheel 78 is rotatably carried by the clevis 76 in a conventional manner. The wheel 78 is the ground-engaging member which cooperates with legs 42 to support the platform 22. During use of the table 20, the wheels 78 are rotated with the bracket 76 to an orientation generally parallel to the platform 22. In this orientation, wheels 78 accommodate side to side movement of the frame in a direction parallel to the plane of the platform 22 and resist to and fro movement. Thus, a transverse force exerted upon the platform will not normally cause the table 20 to be displaced.

When desired, wheels 78 can be rotated 90° into the plane of the elbow 48 so that the table can be moved in a wheelbarrowlike fashion (see FIG. 1).

Frame 36 is also provided with a tubular coupling 80 (FIG. 2) which intersects the frame 36 at an acute angle and is integral therewith. The coupling 80 is adapted to receive a conventional caster wheel 82 which pivots freely about the axis of the coupling 80. With a caster wheel 82 disposed on each side of the frame 36 and a wheel assembly 52 disposed each elbow 48, the frame 36 and platform 22 may be easily displaced to the upright position illustrated in FIGS. 2 and 3. The casters 82 and the wheels 78 movably support the platform 22 in the upright position, the wheel 78 being selectively adjustable through the bracket 56, by moving handle 64 to determine the angle formed by the platform 22 relative to the vertical.

When desired, the work table 20 may be expanded to present a greater work surface area. As shown in FIG. 2, the frame 36 carries tubular sleeves 84 and 86 united together in tandem, the longitudinal axes of the sleeves 84 and 86 being parallel one to another. As best shown in FIG. 4, the sleeves 84 and 86 are disposed normal to the sides of the frame 36 at a plurality of longitudinal locations in the plane of the frame 36. Each sleeve 84 and 86 telescopically receives a rod 88 and 90, respectively (see also FIG. 3). Rod 88 is welded or otherwise integrally joined to one side of the frame 36 at one end 92, the opposite end being loosely carried within the sleeve 86. The extended position of rod 88, shown in FIG. 2, may be maintained by tightening thumbscrew 94 into sleeve 86. When desired, the rod 90, similarly secured to the other side of frame 36 and loosely carried within the sleeve 84 may be extended as shown in FIG. 3. Rod 90 may be secured in the extended position by tightening thumbscrew 96 into sleeve 84.

In the extended position, additional panels 24 and 26 may be disposed upon the frame 36 preferably on either side of the panel 98 as shown in FIGS. 5 and 6. Referring particularly to FIG. 6, the panel 98 has sides 100 each having a reverse bend 102 to define a slot 104. A side edge 28 of each of the panels 24 and 26 is disposed in the corresponding slot 104 so that the panels 24, 98 and 26 are joined together. In the expanded position, the central brackets 41 (FIGS. 4 and 6) carried by the sleeves 84 and 86 support the panel 98. The panels 24 and 26 are suspended between the panel 98 and the peripherally disposed brackets 40.

For convenience, brackets 106 and 108, having a generally L-shaped configuration, are secured to each tandem pair of sleeves 84 and 86. Brackets 106 and 108 are spaced sufficiently so as to receive the panels 24 and 26 (see FIG. 2) when the understructure 34 is in the contracted condition. Panels 24 and 26 are nested one within the other and thereafter inserted into brackets 106 and 108.

Panel 98 has a lateral dimension which is, preferably, slightly greater than the width of conventional vinyl wall covering (i.e. 27 inches). It is presently preferred that panels 24 and 26 also have a combined lateral dimension which is approximately 27 inches so that when the panel 98 and panels 24 and 26 are assembled upon the frame 36 as shown in FIGS. 3, 5 and 6, wall covering of 54 inches can be easily accommodated. Although the panel 98 may be disposed at any suitable location over the frame 36, it is presently preferred that the panel 98 be interposed between the panels 24 and 26.

As shown in FIGS. 3 and 5, the table 20 may be disposed in either the generally upright or horizontal positions, respectively. Added strength is given to the understructure 38 in either position by cross braces 110 and 112. Cross braces 110 and 112 have telescoping inner tubes 114 and 116, respectively, which extend or retract from the braces 110 and 112 to accommodate lateral expansion and retraction of the frame 36. Tubes 114 and 116 are integrally united with the collars 118 which circumscribe each leg 46 and is selectively rotatable relative to the leg. Also, each brace 110 and 112 is integral with a collar 120 similarly rotatable upon leg 42. As can be appreciated best by reference to FIG. 3, the braces 110 and 112 are angularly related one to another, the degree of angular relation depending upon the lateral extension or retraction of the frame 36. Thus, the cross braces 110 and 112 move in scissorlike fashion relative to one another.

Referring again to FIG. 3, when the table 20 is situated in the upright orientation, a roll 121 of conventional wall covering 122 may be rotatably mounted upon a spindle or rod 124. Roll 121 has a hollow core 119, as is conventional, loosely disposed over spindle 124 so that wall covering 122 can be easily stripped from the roll 121. Preferably, the spindle 124 is carried upon hooks or other retainers 126 carried by each brace 50. If desired, when the table 20 is in the horizontal position shown in FIG. 5, the wall covering 122 and spindle 124 may be supported upon hooks or brackets 128 carried by each leg 42. It is presently preferred that when the table 20 is disposed in the upright position of FIG. 3, the wall covering 122 be interposed through a roller guide assembly generally designated 130.

With particular reference to FIG. 7, the guide assembly 130 comprises side brackets 132 each being provided with a downwardly projecting peg (not shown) adapted to be received by the hollow frame 36 in telescopic relation. Thus, the guide assembly 130 may be selectively removed from the table 20 by withdrawing the bracket and attached peg from the frame 36.

A first roller 134 is rotatably carried by brackets 132 adjacent the rearward end of the bracket. A tubular forward bar 136 is nonrotatably mounted between brackets 132 adjacent the forward edge of the bracket 132. The bar 136 has a longitudinal slot 138 along its entire length, the slot opening forwardly adjacent the top edge of the panels 24, 26 and 98. Importantly, the slot 138 is exposed at the ends 140 of the bar 136 by a notch or recess 142 in each bracket 132. Thus, a cutting instrument (not shown) may be displaced the entire length of slot 138 to sever a desired length of wall covering 122 from the supply roll 121. Since the slot opens at each end 140, the cutting instrument will not be dulled or damaged by inadvertently striking a rigid obstruction at the ends 140 of the slot 138.

Each bracket 132 is provided with a generally vertical channel 144 into which the diametrally reduced end 146 of a roller 148 is placed. Roller 148 is biased toward bar 136 with tension springs 150 and normally rests upon the bar 136 when no wall covering is interposed therebetween. Each tension spring 150 has a hooked end 152 carried upon the diametrally reduced end 146 of roller 148. The opposite end 154 is restrained in any selected one of a plurality of apertures 156 disposed in longitudinal spaced relation in the brace 36. The tension on spring 150 is preferably adjusted by attaching end 154 into an aperture 70 so that the wall covering 122 can be dispensed from the roll 121 between roller 148 and bar 136 by a manual pulling force exerted upon the wall covering 122. However, the tension is preferably sufficient to avoid inadvertent dispensing of the wall covering 122 when the wall covering 122 becomes heavy when the added weight of adhesive material is placed on the wall covering.

It is presently preferred that at least two guide assemblies be provided, one to accommodate the expanded 54 inch frame width and another to accommodate the 27 inch frame width. Alternatively, an expandible guide assembly could be used.

As shown in FIG. 3, the wall covering 122 is dispensed from roll 121 and threaded over rollers 34 and between roller 148 and bar 136 across the work surface 34. The wall covering 122 may then be coated with adhesive and otherwise prepared to place on a wall.

In the method of preparing wall covering **122** for placement on a wall (not shown), the appropriate width of wall covering is selected. Currently, the most common widths are 27 and 54 inches. Assuming the table **20** to be in the retracted condition of FIG. **1** and assuming the 54-inch wall covering is selected, the table **20** is moved in wheelbarrowlike fashion to a work site. If 54 inch wall covering is to be used, lateral dimension of the table **20** is then adjusted by expanding the frame **36** to correspond to the selected 54 inch wall covering (see FIG. **2**). The frame is expanded by extending the rods **88** and **90** telescopically outward from the respective sleeves **84** and **86** and tightening the thumbscrews **94** and **96**. Platform panels **24** and **26** are removed from the brackets **106** and **108** and are placed on the frame **36** and joined to the corresponding side of panel **98** so that the frame is completely covered with panels.

The table **20** may be used with the platform **22** and frame **36** in the horizontal orientation by adjusting wheel assembly **52** to the desired height and by adjusting the length of legs **42** until the table is level.

Alternatively, the platform **22** and frame **36** may be oriented in the upright position and the position of wheel assembly **52** is adjusted so that the platform **22** forms a desired angle relative to the vertical.

In the upright orientation, it is preferred that the guide assembly **130** be attached to the frame **36** and the tension on spring **150** properly adjusted to adequately control the dispensing of wall covering **122** from roll **121**.

Significantly, it is preferred that wheels **78** be oriented so that the table **20** can be easily displaced only in a direction parallel to the plane of platform **22** and displacement out of the plane of platform **22** is resisted. In this way, an artisan or other user of the table **20** can more easily move the table side to side in a direction parallel to the wall on which he is working; but to and for movement of table **20** which might otherwise result during the application of adhesive material or otherwise treating the wall covering **122** is resisted.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore to be embraced therein.

What I claim and desire to be secured by Letters Patent is:

1. A table for preparation of wall covering comprising:

a generally flat work surface;

a frame for supporting the work surface in either selected one of the generally horizontal or generally upright orientations;

means carried by the frame accommodating lateral displacement of the frame when the frame is angularly disposed relative to the horizontal; and

said means comprising wheel means disposed at the upper and lower sides of one end face of the frame and floor-engaging legs disposed at the other end of the frame so that in the upright orientation the table is laterally displaceable and in the generally horizontal position said legs cooperate with the lower of the wheel means and the table resists lateral movement.

2. A table as defined in claim **1** wherein said work surface comprises a plurality of individual segments removably carried upon the frame.

3. A table as defined in claim **1** wherein said frame comprises means for selectively expanding the frame to form a support area of greater dimension.

4. A table as defined in claim **3** wherein said expanding means comprises telescoping poles and brace means having scissorlike movement, the poles and brace means being displaceable from a retracted position presenting a minimum support area to an extended position presenting a maximum support area and vice versa.

5. A table as defined in claim **1** wherein at least some of the wheels comprise means selectively restraining the wheels in at least one position to accommodate facile side to side and resist to and fro movement.

6. A table as defined in claim **5** wherein the at least some wheels are vertically adjustable in height to selectively vary the angle of the work surface relative to the vertical when the frame is in the upright orientation.

7. A table as defined in claim **1** further comprising delivery means comprising a bracket for supporting a roll of wall covering and guide means carried by the frame and comprising a roller forcibly biased toward an opposed guide bar, the roller and guide bar receiving wall covering therebetween.

8. A table as defined in claim **7** wherein said delivery means comprises a cutting slot traversing the entire length of the delivery means and, having an unobstructed opening to the exterior of the frame at both ends of the slot.

9. A table for preparation of wall covering comprising:

a laterally expandable frame comprising tubular members disposed in telescopic relation and selectively reciprocating from an expanded position to a retracted position and vice versa;

means restraining the frame in the selected expanded or retracted position;

a generally flat work surface removably carried upon the frame, the work surface comprising a plurality of panels individually removable from and attachable to the frame to vary the exposed area of work surface;

means accommodating orienting the work surface selectively (1) in a generally upright orientation or (2) in a generally horizontal orientation; and

wheel means disposed on opposed sides of an end face of the frame for accommodating side-to-side displacement of the frame and work surface when the work surface is in the generally upright orientation and fixed means disposed at the other end of the frame and cooperating with said wheel means for selectively inhibiting displacement of the frame and work surface when the work surface is in the generally horizontal orientation.